

The Office Action concedes that Bashir fails to disclose the claimed body having a supporting portion and a pair of arms connected via elastic hinges to the supporting portion, a functional membrane connected to the arms, a detection means including a force sensor that is connected to one of the arms and an actuator that provides tension to the functional membrane and that is connected to the other arm (Office Action, page 2). The Office Action alleges that the combination of Bashir with Valadier cures Bashir's deficiency. Applicants respectfully assert that the combination does not.

Bashir is directed to a monitoring apparatus that detects the viability of biological cells (Abstract). Bashir's device includes microcantilevers that extend from a substrate 102 onto a chamber 104 (C24:L44-47, Fig. 27). Bashir discloses that a detector 108 is connected to the microcantilevers 106 for sensing a state of deformation and an upper layer of the microcantilevers 106 are provided with a layer 110 of an environmentally sensitive hydrogel polymer that has a configuration that changes in accordance with the presence or absence of an environmental parameter (C24:L47-54). Bashir discloses that the microcantilevers 106 patterned with environmentally sensitive hydrogel are observed to determine whether the microcantilevers bend (C22:L34-37). Based on an optical detection of the bend of the microcantilevers 106 using Microscope II in the focus plane of the Microscope II, the deflection of the microcantilevers 106 caused by the environmentally sensitive hydrogels 110 is determined (C22:L37-52).

As tentatively agreed by Examiner Davis during the August 18, 2009 telephone interview, a skilled artisan would not have been motivated to combine Bashir with Valadier to allegedly cure the deficiencies of Bashir. Valadier is directed to a dynamometer provided with a testing member having a bending beam 10 (Abstract). The bending beam 10 is embedded in a support and is elastically deformable under the influence of a force Q applied to its opposite end (Abstract). Importantly, Valadier is not directed to a microscopic

dynamometer nor directed to a dynamometer for the detection of biological viability and the dynamometer does not use a hydrogel polymer. Nor does Valadier provide evidence to support that the dynamometer would result in the detection of the viability of biological cells. Thus, a skilled artisan would not have had any reason to have combined the two references. For example, there is no known viable reason or means to combine or modify the prior art references based on the differences between the references. A skilled artisan would not have been motivated to combine Valadier's bending beam 10 in the monitoring apparatus disclosed in Bashir because of the failure of Valadier to disclose that the dynamometer can detect biological viability.

Additionally, as tentatively agreed by Examiner Davis during the August 18, 2009 telephone interview, Valadier's bending beam 10 cannot reasonably constitute the claimed functional membrane. The Office Action alleges that Valadier's bending arm 10 constitutes the claimed functional membrane (Office Action, pages 2-3). In response to the Remarks of the January 21, 2009 Request for Reconsideration, the Office Action further alleges that Valadier's bending beam 10 is a thin or lightly layered beam, allegedly further evidencing the bending beam 10 as a functional membrane. However, Valadier discloses that the bending beam 10 of the dynamometer is produced from a light alloy such as aluminum alloy. (C2:L16-19). Valadier further discloses that the bending beam 10 is preferably forward of an anodizable light alloy (C3:L50-52). Applicants assert that a skilled artisan would not have understood that the disclosure of Valadier regarding the bending beam 10 constitutes the claimed functional membrane because an anodizable light alloy beam is not a membrane. Thus, Valadier fails to disclose the claimed functional membrane and fails to cure the deficiency of Bashir.

Based on the foregoing, Valadier fails to cure all the deficiencies of Bashir. Accordingly, claim 1 is allowable over Bashir in view of Valadier. Claims 2 and 4-15 are

also allowable over Bashir in view of Valadier for at least the same reasons as claim 1, as well as the additional features the claims recite. Applicants respectfully request withdrawal of the rejection.

The Office Action rejects claim 3 under 35 U.S.C. §103(a) over Bashir in view of Valadier and in further view of *An Artificial Nose Based on a Micromechanical Cantilever Array* (Lang). Applicants respectfully traverse the rejection.

This rejection is based on the allegation that Bashir in view of Valadier disclose or would have rendered obvious all of the features or subject matter of claim 1. Because, as discussed above, Bashir in view of Valadier do not disclose and would not have rendered obvious all of the features or subject matter of claim 1, and because Lang does not cure the deficiency, the rejection is improper. Applicants respectfully request withdrawal of the rejection.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:KRG/sah

Attachment:  
Petition for Extension of Time

Date: August 27, 2009

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